

# EXHIBIT L

**Analysis of Infringement of U.S. Patent No. 6,968,248 by Huawei Device USA Inc., Huawei Device Co., Ltd., and HiSilicon Technologies Co., Ltd.  
(Based on Public Information Only)**

Plaintiff Ocean Semiconductor LLC (“Ocean Semiconductor”), provides this preliminary and exemplary infringement analysis with respect to infringement of U.S. Patent No. 6,968,248, entitled “AGENT REACTIVE SCHEDULING IN AN AUTOMATED MANUFACTURING ENVIRONMENT” (the “’248 patent”) by Huawei Device USA Inc., Huawei Device Co., Ltd., and HiSilicon Technologies Co., Ltd. (“Huawei”). The following chart illustrates an exemplary analysis regarding infringement by Defendant Huawei’s semiconductor products, systems, devices, components, and integrated circuits, and products containing such circuits, fabricated or manufactured using camLine GmbH’s (“camLine”) semiconductor fabrication or manufacturing equipment, platforms, and/or framework, including camLine’s software and APC system, including the LineWorks factory advanced/automation process control (“APC”) platform hardware and/or software (collectively, “LineWorks”) and/or other APC system and platform hardware and/or software. Such products include, without limitation, SoC chipsets and solutions (e.g., Hi3559A V100, Hi3519A V100, Hi3516D V300, Hi3556A V100, Hi3559 V200, Hi3559A V100, Hi3559C V100, Hi3559 V100, Hi3716M V430, Hi3716M V430, Hi3798C V200, Hi3798M V200H, Hi3798M V300, Hi3798M V310, Hi3796M V200, Hi3798M V200, Hi3796M V100, Hi3798M V100, Hi3716M V420, Hi3716M V410, and Hi3751 V553), processors (e.g., Hi3536, Hi3536C, Hi3536D V100, Hi3531D V100, Hi3521D V100, Hi3520D V400, Hi3520D V300, and Hi3520D V200), TV solutions (e.g., Hi3731 V201, Hi3731 V101, Hi3751 V811, Hi3751 V810, Hi3751 V551, Hi3751 V730, Hi3751 V620, Hi3751 V510, Hi3751 V310, Hi3751 V320, and Hi3751 V600), Kirin solutions (e.g., Kirin 9000/E, Kirin 1020, Kirin 990, Kirin 980, Kirin 970, Kirin 960, Kirin 950, Kirin 930, Kirin 920, Kirin 910, and Kirin 710); Ascend solutions (e.g., Ascend 310 and Ascend 910); Kunpeng solutions (e.g., Kunpeng 920); and Balong solutions (e.g., Balong 5000, Balong 5G01, Balong 765, Balong 750, Balong 720, Balong 710, and Balong 700), systems, products, or devices containing these solutions, and similar systems, products, devices, and integrated circuits (collectively, the “’248 Infringing Instrumentalities”).

The analysis set forth below is based only upon information from publicly available resources regarding the ’248 Infringing Instrumentalities, as Huawei has not yet provided any non-public information.

Unless otherwise noted, Ocean Semiconductor contends that Huawei directly infringes the ’248 patent in violation of 35 U.S.C. § 271(g) by using, selling, and/or offering to sell in the United States, and/or importing into the United States, the ’248 Infringing Instrumentalities. The following exemplary analysis demonstrates that infringement. Unless otherwise noted, Ocean Semiconductor further contends that the evidence below supports a finding of indirect infringement under 35 U.S.C. § 271(b) in conjunction with other evidence of liability.

Unless otherwise noted, Ocean Semiconductor believes and contends that each element of each claim asserted herein is literally met through Huawei’s provision or importation of the ’248 Infringing Instrumentalities. However, to the extent that Huawei attempts to allege that any asserted claim element is not literally met, Ocean Semiconductor believes and contends that such elements are met under the doctrine of equivalents. More specifically, in its investigation and analysis of the ’248 Infringing Instrumentalities, Ocean Semiconductor did not identify any substantial differences between the elements of the patent claims and the corresponding features of the ’248 Infringing Instrumentalities, as set forth herein. In each instance, the identified feature of the ’248 Infringing

Instrumentalities performs at least substantially the same function in substantially the same way to achieve substantially the same result as the corresponding claim element.

Ocean Semiconductor notes that the present claim chart and analysis are necessarily preliminary in that Ocean Semiconductor has not obtained substantial discovery from Huawei nor has Huawei disclosed any detailed analysis for its non-infringement position, if any. Further, Ocean Semiconductor does not have the benefit of claim construction or expert discovery. Ocean Semiconductor reserves the right to supplement and/or amend the positions taken in this preliminary and exemplary infringement analysis, including with respect to literal infringement and infringement under the doctrine of equivalents, if and when warranted by further information obtained by Ocean Semiconductor, including but not limited to information adduced through information exchanges between the parties, fact discovery, claim construction, expert discovery, and/or further analysis.

USP 6,968,248

## Infringement by the '248 Accused Instrumentalities

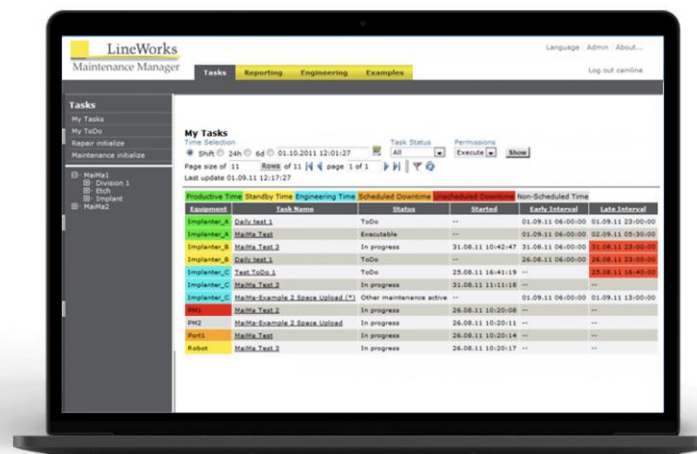
1. A method for scheduling in an automated manufacturing environment, comprising:

To the extent that the preamble of Claim 1 is a limitation, the camLine LineWorks system, which is used to fabricate or manufacture the '248 Infringing Instrumentalities, provides a method for scheduling in an automated manufacturing environment.

For example, camLine's LineWorks MaiMa module provides a method for scheduling in an automated manufacturing environment, as shown below:

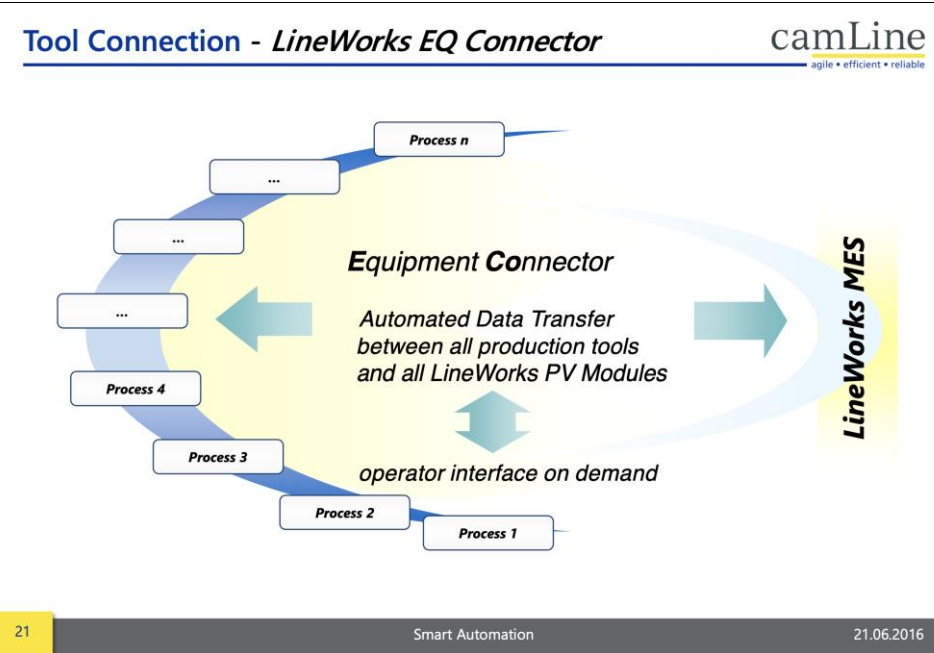
## Details

- Schedule maintenance tasks
- Execute maintenance with full traceability
- ToDo lists and comments in addition to maintenance tasks
- Integration with LineWorks PULSE to synchronize the equipment status
- Connection to LineWorks SPACE for the requalification of production systems after maintenance periods



See camLine LineWorks MaiMa online product description, available at <https://www.camline.com/products/lineworks/lineworks-maima-pulse/> (last visited October 18, 2020) (“MaiMa Webpage”).

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| <p>automatically detecting an occurrence of a predetermined event in an integrated, automated process flow;</p> | <p>The camLine LineWorks system automatically detects an occurrence of a predetermined event in a process flow.</p> <p>For example, the camLine LineWorks EcoFrame module collects data related to a process flow automatically, as shown below:</p> <p style="text-align: center;">LineWorks ECoFrame (Equipment Connection Framework) offers efficient methods for equipment integration including equipment data collection, data routing, and remote equipment control. Due to the automatic data acquisition, the highest data quality and granularity is guaranteed.</p> <p>See LineWorks ECoFrame webpage, available at <a href="https://www.camline.com/products/lineworks/lineworks-ecoframe/">https://www.camline.com/products/lineworks/lineworks-ecoframe/</a> (last visited October 19, 2020) (“ECoFrame Webpage”) (annotated).</p> <p>As another example, the LineWorks Equipment Connector automatically transfers data “between all production tools and all LineWorks PV Modules,” as shown below:</p> |
|---|---|



See Jochen Kinauer, Presentation Slides, “Improve your manufacturing efficiency and quality with smart automation solutions,” at 21, *available at* [http://fs-media.nmm.de/ftp/ITI/ITA/files/vortraege/2\\_2106\\_camLine.pdf](http://fs-media.nmm.de/ftp/ITI/ITA/files/vortraege/2_2106_camLine.pdf) (last visited May 11, 2020) (“Kinauer Presentation”).

As a further example, LineWorks Master Process Monitor (MPM) module detects events in a process flow in real time, e.g., automatically, as shown below:

LineWorks MPM (Master Process Monitor)  
provides manufacturing operators and engineers  
with a real-time overview of their production results.

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|   | <p>See LineWorks MPM Webpage, <i>available at</i> <a href="https://www.camline.com/products/lineworks/lineworks-mpm/">https://www.camline.com/products/lineworks/lineworks-mpm/</a> (last visited October 18, 2020) (“MPM Webpage”).</p>  |
| <p>automatically notifying a software scheduling agent of the occurrence; and</p> | <p>The camLine LineWorks system automatically notifies a software scheduling agent of the occurrence of a predetermined event in an integrated, automated process flow.</p> <p>For example, in the event of a violation of its rules, LineWorks MPM will notify both the MPM server and a responsible group of people, as shown below:</p> <p style="padding-left: 40px;">Information about passed or failed operations is collected by LineWorks WIP for each unit (such as lot) and forwarded to the MPM server which evaluates the results according to defined rules and initiates escalations as required. In case of violation of one of these rules, a notification via e-mail, SMS, etc. is sent to the responsible group of people with the request for confirmation. At such events, production facilities can synchronously be locked or unlocked. All incidents are precisely documented. These records are available for reports and further analysis.</p> <p>See MPM Webpage (annotated).</p> <p>On information and belief, in camLine LineWorks a scheduling agent is notified automatically of the occurrence of a predetermined event. For example, LineWorks ECoFrame notifies a scheduling agent, such as LineWorks MaiMa, of the occurrence of a predetermined event according to communication standard protocols, as shown below:</p> |

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|   | <p>It allows process data, alarms, or events to be routed to other LineWorks modules and / or third-party solutions. The framework supports international communication standard protocols, e.g. SECS/GEM, PROFIBUS, OPC.</p> <p><i>See ECoFrame Webpage (annotated).</i></p>                                   |
| <p>reactively scheduling an action from the software scheduling agent responsive to the detection of the predetermined event.</p> | <p>The camLine LineWorks system reactively schedules an action from the software scheduling agent responsive to the detection of the predetermined event.</p> <p>For example, the LineWorks PULSE module receives information regarding a process event from the LineWorks ECoFrame module, as shown below:</p> |



LineWorks ECoFrame (Equipment Connection Framework) offers efficient methods for equipment integration including equipment data collection, data routing, and remote equipment control. Due to the automatic data acquisition, the highest data quality and granularity is guaranteed.

It allows process data, alarms, or events to be routed to other LineWorks modules and / or third-party solutions. The framework supports international communication standard protocols, e.g. SECS/GEM, PROFIBUS, OPC.

- Broad range of equipment connections via e. g. SECS, HSMS, OPC, Profibus OPC, CORBA, Digital I/O
- SEC (Statistical Equipment Control) in combination with LineWorks SPACE or other SPC systems
- Information forwarding and control of production line actions
- Monitoring of throughput and OEE via LineWorks PULSE
- Handling of alarms and process data logging enables the generation of event reports
- Integrated database for Process Data Collection (PDC)
- Configurable data routing of alarms, events, or process data to other LineWorks modules or third party solutions
- Web-based reporting with LineWorks iGate for collected PDC data
- Recipe download, upload, or select
- Extending the equipment interface by an operator screen
- Optional equipment control

*See ECoFrame Webpage.*

As a further example, LineWorks MaiMa reactively “schedule[s] maintenance tasks” and is “integrat[ed] with LineWorks PULSE to synchronize the equipment status,” as shown below:

## Details

- *Schedule maintenance tasks*
- *Execute maintenance with full traceability*
- *ToDo lists and comments in addition to maintenance tasks*
- *Integration with LineWorks PULSE to synchronize the equipment status*
- *Connection to LineWorks SPACE for the requalification of production systems after maintenance periods*

See MaiMa Webpage (annotated).

As a further example, LineWorks PULSE collects “all equipment data.” On information and belief, “all equipment data” includes data related to the detection of a predetermined event:

Lineworks PULSE is a solution for integrated production monitoring and reporting. Process profitability can be significantly increased by maximizing resource utilization and manufacturing productivity. Downtime Analysis (DTA) can be integrated into your daily business. You reduce insufficient plant availability, unplanned production stoppages or slowdowns, as well as sporadic drops in quality, or can even eliminate these causes completely. According to freely definable plant models, the system collects all equipment data. These are translated into a uniform language for your production.

See LineWorks PULSE Webpage (annotated).